

What is claimed is:

1. A method of treating an autoimmune disorder or inflammatory disorder or ameliorating one or more symptoms thereof, said method comprising administering to a  
5 subject in need thereof a therapeutically effective amount of MEDI-507 or an antigen-binding fragment thereof and a therapeutically effective amount of another, different CD2 binding molecule.
2. A method of treating an autoimmune disorder or inflammatory disorder or  
10 ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of one or more CD2 binding molecules and a therapeutically effective amount of one or more immunomodulatory agents.
3. A method of treating an autoimmune disorder or inflammatory disorder or  
15 ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of MEDI-507 or an antigen-binding fragment thereof and a therapeutically effective amount of one or more immunomodulatory agents.
- 20 4. A method of treating psoriasis or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of one or more CD2 binding molecules and a therapeutically effective amount of one or more dermatological agents.
- 25 5. A method of treating psoriasis or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of MEDI-507 and a therapeutically effective amount of one or more dermatological agents.
- 30 6. A method of treating an autoimmune disorder or inflammatory disorder or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of one or more CD2 binding molecules and a therapeutically effective amount of one or more anti-angiogenic agents.

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7. A method of treating an autoimmune disorder or inflammatory disorder or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of MEDI-507 or an antigen-binding fragment thereof and a therapeutically effective amount of one or more anti-angiogenic agents.

8. A method of treating an autoimmune disorder or inflammatory disorder or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of a first CD2 binding molecule and a therapeutically effective amount of a second, different CD2 binding molecule, wherein administration of the therapeutically effective amount of the first CD2 binding molecule results in the first CD2 binding molecule binding to at least 30% of the CD2 polypeptides expressed by peripheral blood lymphocytes after the administration of the first CD2 binding molecule and prior to the administration of the second CD2 binding molecule.

9. A method of treating an autoimmune disorder or inflammatory disorder or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of a first CD2 binding molecule and a therapeutically effective amount of a second, different CD2 binding molecule, wherein administration of the therapeutically effective amount of the first CD2 binding molecule results in a mean absolute lymphocyte count of approximately 500 cells/mm<sup>3</sup> to below 1200 cells/mm<sup>3</sup> and administration of the therapeutically effective amount of the second, different CD2 binding molecule maintains a mean absolute lymphocyte count of approximately 500 cells/mm<sup>3</sup> to below 1200 cells/mm<sup>3</sup>.

10. A method of treating an autoimmune disorder or inflammatory disorder or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of a first CD2 binding molecule and a therapeutically effective amount of a second, different CD2 binding molecule, wherein the therapeutically effective amount of the first CD2 binding molecule results in at least 30% of the CD2 polypeptides expressed by peripheral blood lymphocytes being bound to CD2 binding molecules after the administration of the first CD2 binding molecule and the administration of the therapeutically effective amount of the second, different CD2

binding molecule restores at least 30% of the CD2 polypeptides expressed by lymphocytes being bound by CD2 binding molecules.

5 11. A method of treating an autoimmune disorder or inflammatory disorder or ameliorating one or more symptoms thereof, said method comprising administering to a subject in need thereof a therapeutically effective amount of MEDI-507 or an antigen-binding fragment thereof and a therapeutically effective amount of one or more anti-inflammatory agents.

10 12. The method of claim 8, 9 or 10, wherein the first CD2 binding molecule is an anti-CD2 antibody that immunospecifically binds to a CD2 polypeptide.

13. The method of claim 8, 9 or 10, wherein the first CD2 binding molecule is a fusion protein that immunospecifically binds to a CD2 polypeptide.

15 14. The method of claim 8, 9 or 10, wherein the second CD2 binding molecule is a fusion protein that immunospecifically binds to a CD2 polypeptide.

20 15. The method of claim 12, wherein the second CD2 binding molecule is a fusion protein that immunospecifically binds to a CD2 polypeptide.

16. The method of claim 8, 9 or 10, wherein the second CD2 binding molecule is an anti-CD2 antibody that immunospecifically binds to a CD2 polypeptide.

25 17. The method of claim 13, wherein the second CD2 binding molecule is an anti-CD2 antibody that immunospecifically binds to a CD2 polypeptide.

18. The method of claim 12, wherein the antibody is a monoclonal antibody.

30 19. The method of claim 16, wherein the antibody is a monoclonal antibody.

20. The method of claim 18, wherein the monoclonal antibody is a human or humanized monoclonal antibody.

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21. The method of claim 19, wherein the monoclonal antibody is a human or humanized monoclonal antibody.

22. The method of claim 12, wherein the anti-CD2 antibody is LoCD2a/BTI-322 or MEDI-507.

23. The method of claim 16, wherein the anti-CD2 antibody is LoCD2a/BTI-322 or MEDI-507.

24. The method of claim 13, wherein the fusion protein is LFA3TIP.

25. The method of claim 14, wherein the fusion protein is LFA3TIP.

26. The method of claim 2, 4 or 6, wherein at least one CD2 binding molecule is an anti-CD2 antibody that immunospecifically binds to a CD2 polypeptide.

27. The method of claim 26, wherein the antibody is a monoclonal antibody.

28. The method of claim 27, wherein the monoclonal antibody is a human or humanized monoclonal antibody.

29. The method of claim 2, 4 or 6, wherein at least one CD2 binding molecule is a fusion protein that immunospecifically binds to a CD2 polypeptide.

30. The method of claim 29, wherein the fusion protein is LFA3TIP.

31. The method of claim 2, 4 or 6, wherein the CD2 binding molecules are administered to said subject parenterally.

32. The method of claim 8, 9 or 10, wherein the first and second CD2 binding molecule are administered to said subject parenterally.

33. The method of claim 1, 3, 5, 7 or 11, wherein MEDI-507 is administered to said subject parenterally.

34. The method of claim 2, 4 or 6, wherein said effective amount of one or more CD2 binding molecules is a dose ranging from 0.5 to 100  $\mu$ g/kg.

35. The method of claim 2, 4 or 6, wherein said effective amount of one or more CD2 binding molecules is a unit dose of 0.1 mg, 0.25 mg, 0.4 mg, 0.5 mg, 1 mg, 2 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 8 mg, 9 mg, 10 mg, 11 mg, 12 mg, 13 mg, 14 mg or 15 mg.

36. The method of claim 2, 4 or 6, wherein said effective amount of one or more CD2 binding molecules is a unit dose of between 0.1 mg and 20 mg.

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37. The method of claim 2, 4 or 6, wherein said effective amount of the first and the second CD2 binding molecules is a dose of between 0.5 and 100  $\mu$ g/kg.

38. The method of claim 8, 9 or 10, wherein said effective amount of the first and the second CD2 binding molecules is a unit dose of 0.1 mg, 0.25 mg, 0.4 mg, 0.5 mg, 1 mg, 2 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 8 mg, 9 mg, 10 mg, 11 mg, 12 mg, 13 mg, 14 mg or 15 mg

39. The method of claim 2, 4 or 6, wherein at least one CD2 binding molecule does not inhibit the interaction between a CD2 polypeptide and LFA-3.

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40. The method of claim 1, 8, 9 or 10, wherein said effective amount of MEDI-507 is a unit dose of 0.1 mg, 0.25 mg, 0.4 mg, 0.5 mg, 1 mg, 2 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 8 mg, 9 mg, 10 mg, 11 mg, 12 mg, 13 mg, 14 mg or 15 mg.

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41. The method of claim 4 or 5, wherein at least one dermatological agent is a topical agent.

42. The method of claim 41, wherein the topical agent is an emolliment, salicylic acid, coal tar, a topical steroid, a topical corticosteroid, a topical vitamin D3 analog, tazarotene, or a topical retinoid.

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43. The method of claim 4 or 5, wherein at least one dermatological agent is phototherapy.

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44. The method of claim 2 or 3, wherein at least one immunomodulatory agent is a small organic molecule.

45. The method of claim 2 or 3 wherein at least one immunomodulatory agent is  
5 a T cell receptor modulator or a cytokine receptor modulator.

46. The method of claim 44, wherein the small organic molecule is  
methotrexate, leflunomide, cyclophosphamide, cyclosporine A, FK506, mycophenolate  
mofetil, rapamycin, mizoribine, deoxyspergualin, brequinar, a malononitriloamide, a steroid  
10 or a corticosteroid.

47. The method of claim 45, wherein the T cell receptor modulator is an  
antibody, peptide or a fusion protein which immunospecifically binds to a T cell receptor.

48. The method of claim 47, wherein the antibody that immunospecifically binds  
15 to a T cell receptor is a monoclonal antibody or an antigen-binding fragment thereof.

49. The method of claim 48, wherein the monoclonal antibody is a human or  
humanized monoclonal antibody.  
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50. The method of claim 47, wherein the antibody is an anti-CD3 antibody, an  
anti-CD4 antibody, an anti-CD8 antibody, an anti-CD11a antibody, an anti-CD40 antibody,  
an anti-CD40L antibody, an anti-CD80 antibody or an anti-LFA1 antibody.

51. The method of claim 47, wherein the fusion protein is CTLA4-Ig.  
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52. The method of claim 45, wherein the cytokine receptor modulator is a  
cytokine, a fragment of a cytokine, a fusion protein or an antibody that immunospecifically  
binds to a cytokine receptor.  
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53. The method of claim 45, wherein the cytokine receptor modulator is a  
peptide, polypeptide, fusion protein or an antibody that immunospecifically binds to a  
cytokine.  
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54. The method of claim 52, wherein the antibody that immunospecifically binds to a cytokine receptor is a monoclonal antibody or an antigen-binding fragment thereof.

55. The method of claim 54, wherein the monoclonal antibody is a human or humanized monoclonal antibody.

56. The method of claim 52, wherein the antibody is an anti-IL-2 receptor antibody or anti-IL-12 receptor antibody.

57. The method of claim 53, wherein the antibody that immunospecifically binds to a cytokine is a monoclonal antibody or an antigen-binding fragment thereof.

58. The method of claim 57, wherein the monoclonal antibody is a human or humanized monoclonal antibody.

59. The method of claim 53, wherein the antibody is an anti-IL-1 $\beta$  antibody or an anti-IL-6 antibody.

60. The method of claim 52, wherein the cytokine is IL-4 or IL-10.

61. The method of claim 53, wherein the polypeptide is a fragment of a cytokine receptor that immunospecifically binds to a cytokine.

62. The method of claim 6 or 7, wherein at least one anti-angiogenic factor is angiostatin, a TNF- $\alpha$  antagonist, a VEGFR antagonist, an RGD containing peptide, or endostatin.

63. The method of claim 62, wherein the TNF- $\alpha$  antagonist is ENBREL™ or REMICADE™.

64. The method of claim 11, wherein at least one anti-inflammatory agent is a non-steroidal anti-inflammatory drug.

65. The method of claim 64, wherein the non-steroidal anti-inflammatory drug is aspirin, ibuprofen, diclofenac, nabumetone, naproxen, or ketoprofen.



66. The method of any one of claims 1-3 and 6-11, wherein the autoimmune disorder is rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, Reiter's Syndrome, psoriasis, or lupus erythematosus.

5 67. The method of any one of claims 1-3 and 6-11, wherein the inflammatory disorder is asthma, encephalitis, inflammatory bowel disease, chronic obstructive pulmonary disease (COPD), arthritis, or an allergic disorder.

68. The method of claim 4 or 5, wherein the psoriasis is plaque psoriasis.

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69. The method of any one of claims 1-11, wherein the subject is a human.

70. An article of manufacture comprising packaging material and a pharmaceutical composition in suitable form for administration to a human contained within  
15 said packaging material, wherein said pharmaceutical composition comprises MEDI-507 or an antigen-binding fragment thereof, another therapeutic factor and a pharmaceutically acceptable carrier.

71. The article of manufacture of claim 70 which further comprises instructions  
20 contained with said packaging material which suggests a dosing regimen for the prevention or treatment of an inflammatory disorder or an autoimmune disorder.

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